

REMARKS

Claims 23 and 24 are added, and therefore claims 1, 4 to 8, and 11 to 24 are now pending in the present application.

In view of the following, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Applicants respectfully request that the Examiner acknowledge in the next Office Communication acceptance of the Drawings and the claims for foreign priority.

Claims 1, 4 to 8, 11 to 22 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent 6,406,939 (“Lin”) in view of U.S. Patent Application 2003/0080392 (“Zuniga-Ortiz”) and U.S. Patent 6,372,539 (“Bayan”) in further view of U.S. Patent No. 5,849,170 (“Djokic”).

Claims 1, 4 to 8, 11 to 22 were also rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent 6,406,939 (“Lin”) in view of the “Background Information” (the characterization of the Background Information is not necessarily agreed with for purposes of this response) in further view of U.S. Patent No. 5,849,170 (“Djokic”).

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Also, as clearly indicated by the Supreme Court in *KSR*, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *See KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, at 1396. Second, there must be a reasonable expectation of success. *In re*

Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

As an initial matter, claim 3 was previously canceled, therefore any rejection of claim 3 is moot.

While the rejections may not be agreed with, to facilitate matters, claims 1 and 11 have been rewritten to better clarify the claimed subject matter.

Claim 1, as presented, is to a method for producing a conductive layered coating on an insulating substrate, comprising: equipping, in selected regions, at least one surface of an electrically insulating substrate with a coating of an electrically highly conductive first metal, the coating being structured as conductor paths; *structuring the first metal to cover locally the at least one surface of the substrate;* cleaning the at least one coated surface; seeding the coating with seeds of a second metal; depositing a first layer including an alloy of the second metal onto the coating seeded with the seeds of the second metal; depositing a second continuous layer including the alloy of the second metal onto the coating seeded with the seeds of the second metal, the second continuous layer covering the first layer; firing the substrate deposited with the first and second layers of the second metal to form the conductive layered coating, the firing being performed so that the first metal is diffused with the second metal; and contacting a gold bonding wire to the conductive layered coating, wherein: the substrate includes a low-temperature co-fired ceramic (LTCC), the first metal includes silver, and the second metal includes palladium.

In particular, claims 1 and 11 have been rewritten to provide that *the first metal is structured to cover locally at least one side of the substrate.* None of the applied references, whether taken alone or combined, disclose or suggest the claimed subject matter. In particular, for example, the Lin reference does not disclose either an insulating substrate or a first metal. Contrary to the conclusory assertions of the Office Action, Lin does not disclose an insulating substrate coated by a electrically highly conductive first metal.

The Office Action (at page 2) conclusorily asserts that an integrated chip (reference item 401) corresponds to a substrate and that terminal pads (item 402) correspond to a first metal. In fact, an integrated chip is an electronic circuit which may be manufactured

on a substrate. *An integrated chip itself includes, but is not a substrate.* Therefore, Lin does not contain any disclosure of a substrate that is conductively coated, as provided for in the context of the presently claimed subject matter.

Further, it is respectfully submitted that the terminal pads simply do not correspond to a first metal that is used to coat the substrate. In Lin, the terminal pads themselves are being coated. (See Lin, col. 4, lines 50-54). In contrast, the presently claimed subject matter provides that the first metal is used to coat the substrate. The present application simply does not discuss coating the first metal, so that Lin plainly teaches away from the claimed subject matter.

Also, Lin does not disclose the feature of seeding the coating of the first metal with seeds of a second metal. As to col. 6, lines 50-55, of Lin, the text does not disclose or suggest this feature of the claimed subject matter. Rather, Lin clearly discusses immediately immersing the integrated chip after rinsing in a electroless plating bath where a film builds on the terminal pads. See id. Accordingly, Lin does not disclose or suggest an intermediate step in which the first metal is seeded by the second metal before a layer is deposited on the first metal, as provided for in the context of the presently claimed subject matter.

Furthermore, neither Lin nor any of the secondary references disclose or suggest the feature in which the coating of the first metal is structured as a conductive path. Conveniently, the Office Action did not properly address this feature of the claimed subject matter.

As to the feature in which the first and second layers on the substrate are diffused through firing, the Office Action admits that this subject matter is not disclosed by the Lin reference. Furthermore, contrary to the Office Action's assertions, it is believed and respectfully submitted that it is not well known that components are fired in order to bond them after their formation.

The Office Action has not provided (as previously requested) an affidavit or published information supporting the Official Notice in compliance with the M.P.E.P., and thus any Official Notice is traversed.

Additionally, the Applicant's "Background Information" does not particularly disclose or suggest firing and diffusing two metals together. The purported "Admission" by the Applicants does not, in fact, provide any details about firing or diffusion. Any assertion that the "Background Information" section somehow discloses or suggests firing and

diffusing two metals together, as provided for in the context of the presently claimed subject matter, is wholly conclusory.

For the foregoing reasons, claim 1, as presented, is allowable, as are its dependent claims 4 to 8 and 19 to 22.

Claim 11 includes features like those of claim 1, as presented, and it is therefore allowable for essentially the same reasons, as are its dependent claims 12 to 18.

As further regards all of the obviousness rejections, any Official Notice is again respectfully traversed to the extent that it is maintained and it is again requested that the Examiner provide specific evidence to establish those assertions and/or contentions that may be supported by the Official Notices under 37 C.F.R. § 1.104(d)(2) or otherwise. In particular, it is respectfully requested that the Examiner provide an affidavit and/or that the Examiner provide published information concerning these assertions. This is because the § 103 rejections are apparently being based on assertions that draw on facts within the personal knowledge of the Examiner, since no support was provided for these otherwise conclusory and unsupported assertions. (See also MPEP § 2144.03).

Accordingly, claims 1, 4 to 8 and 11 to 22 are allowable.

New claims 23 and 24 do not add any new matter and are supported by the present application , including the specification. Claims 23 and 24 respectively depend from claims 1 and 11, as presented, and they are therefore allowable for essentially the same reasons as their respective base claims.

Accordingly, claims 1, 4 to 8 and 11 to 24 are allowable.

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CONCLUSION

In view of the above, it is respectfully submitted that all of the presently pending claims 1, 4 to 8 and 11 to 24 are allowable. It is therefore respectfully requested that the rejections (and any objections) be withdrawn. Since all issues raised by the Examiner have been addressed, an early and favorable action on the merits is respectfully requested.

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Respectfully submitted,

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